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ABSTRACT

The paper pointed out the need for an understanding of what motivates the young American Indian student to attend school and to want to achieve in a school setting. The Slosson Intelligence Test and the Wide Range Achievement Test were used to evaluate the effectiveness of the Engelmann-Becker Follow Through Program in motivating students. At the time of this study, the Engelmann-Becker system was used in 5 elementary schools on the Rosebud Sioux Reservation, South Dakota. Seventeen classrooms in these schools used the Engelmann-Becker curriculum. Of the 421 students enrolled in the classrooms, 390 were Sioux Indian children. It was concluded that motivation is a very difficult thing to measure with the existing testing devices used in the Follow Through Program. The tests did indicate that the students were doing quite well in reading but were lagging in spelling and arithmetic, which could be attributed to the tremendous reading program offered to the Follow Through students. Several parents have questioned some of the methods of instruction in this program. Three recommendations are presented, e.g., experimenting with new methods that might find better ways of teaching spelling and arithmetic to these students. (FF)

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AN ASSESSMENT OF MOTIVATION AMONG INDIAN STUDENTS IN THE TODD COUNTY SCHOOL SYSTEM

A Project Paper Presented to

Mr. John Moss of the Graduate Faculty

Northern State College

Aberdeen, South Dakota

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in Partial Fulfillment

of the Requirements for the Degree

Master of Special Education

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by

Harold Foote

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CHAPTER I

INTRODUCTION

Indian students who attend public schools have been criticized for their lack of school attendance and scholastic accomplishment from the time the white man invaded America. Teachers and school administrators have worked out various solutions to the problem but as yet have not arrived at a workable solution.

These students have little incentive to attend school. After all, what good will a school education do for an Indian who will spend most of his life in low cost housing on any one of the reservations scattered throughout the United States?

If an Indian child does go to school, what is there to motivate this child to learn? Learning for the sake of learning makes little if any sense to Indian people. You don't need an education to get an odd job now and then. The children see their parents and other adult Indians making a living without an education.

Our white culture which stresses money as a great value does not impress the Indian. To be happy is the Indian's goal. This means that he must be free to live his life with his own cultural values.

Many of these cultural values have been taken away and white cultural values imposed. In this sense, they no longer have all of their old culture. However, what they do have left, they are determined to keep.

I. THE PROBLEM

Statement of the problem. The purpose of this paper is to point out the need for an understanding of what motivates the young Indian student (1) to attend school and (2) to want to achieve in a school setting. The study will be done on the Follow Through program which has been in operation in kindergarten through second grade for the past two and one half years at Todd County on the Rosebud Sioux Indian Reservation in South Dakota.

Importance of the study. The drop-out rate, the poor attendance, and the low level of academic achievement of Indian students has been a cause of alarm to most educators who are associated with schools on or near Indian reservations. Educators have been constantly searching for instructional programs and innovative procedures which will best serve the needs of disadvantaged youth. It has been vitally important that educational systems have begun to meet the physical, psychological, social, and instructional needs of the economically and educationally deprived segment of the population.

The Engelmann-Becker curriculum, which is the instructional component of Project Follow Through, focuses strongly on academic objectives. It is built on the belief that every child can achieve well in the academic area if he is properly motivated and if he receives adequate instruction. The disadvantaged child is usually behind in relevant skills at the beginning of kindergarten or first grade, particularly language concepts. Although the Engelmann-Becker Program has only included the early school levels, it is conceived that it will ultimately affect all levels of elementary and secondary education in the Todd County Independent School District.

II. METHODS AND PROCEDURES USED

This study was designed to be an assessment of the problem of motivating Indian students to achieve in a school setting. The Slosson Intelligence test and the Wide Range Achievement test will be given and an evaluation will be done to determine if the Engelmann-Becker Program is motivating the students in the program.

III. DEFINITIONS OF TERMS

Todd County Independent School District. This is a county independent school district located in the south-central part of South Dakota. At the time of this study, the Engelmann-Becker instructional system was used in five

elementary schools. Seventeen classrooms in five different elementary schools used the Engelmann-Becker curriculum. Three-hundred and ninety of the 421 students enrolled in the Engelmann-Becker classrooms were Sioux Indian children.

Engelmann-Becker Curriculum. This is the instructional component of Project Follow Through in the Todd County school system. This program is used in five elementary schools in Todd County. It is presently being used in kindergarten, first, and second grades. The curriculum includes prepared materials by the Engelmann-Becker Corporation, in cooperation with the University of Illinois, in reading, arithmetic, language, science, art, and music.

Rosebud School. This is one of the elementary schools in the Todd County school system. Four Engelmann-Becker classrooms were located here. This school is located at Rosebud, South Dakota.

He Dog School. This is another one of the elementary schools in the Todd County system. Three Engelmann-Becker classrooms were located here. This school is located in the northwest part of Todd County.

North Elementary School. This is another one of the elementary schools in the Todd County school system. Eight Engelmann-Becker classrooms were located here. This school is located at Mission, South Dakota.

Spring Creek School. This is one of the elementary schools in the Todd County school system. Qne Engelmann-Becker classroom was located here. This school is located eight miles west of St. Francis, South Dakota.

O'Kreek School. This is another elementary school in the Todd County school system. One Engelmann-Becker classroom was located here. This school is located at O'Kreek, South Dakota.

Student. The term "student" is used to refer to any child taking part in the Engelmann-Becker Follow Through program.

Follow Through. This term refers to a program that has been in operation for about three years in the Todd County school system.

Teacher's Aides. These are Indian women from the local communities who are employed to assist with classroom procedures. They received special training from the University of Illinois prior to their employment. Thirty aides were used in the seventeen Engelmann-Becker classrooms. They assisted the teachers in the classrooms in any manner that would be in the best interests of the students. They also served as a team in the instructional processes of the classroom by working with the teachers. At times they served as teachers of certain subjects.

Dormitory. These were operated by the Bureau of Indian Affairs for Indian students who live outside of the school district but attend schools in Todd County. There was a boy's and a girl's dormitory located at Mission, South Dakota. Some of the children who were enrolled in the Engelmann-Becker program were housed in these two dormitories.

Data Collection Aides. This term refers to the three people employed by the school district. Two people were employed as continuous testers and one person was employed as a video tape operator.

Dormitory Aides. This term refers to the three aides who were employed in the girl's dormitory and the three aides who were employed in the boy's dormitory. Their main job was to act as a substitute parent to the children who were enrolled in the Engelmann-Becker classrooms.

Field Workers. Three people were employed as laison workers between the school and the home.

Director. This was the one person who was employed to be the overall director of the program throughout the school district.

Consultants. This term refers to the three persons who represented the Engelmann-Becker Corporation from the University of Illinois. They are on site two weeks out of

each month on a staggered basis. Two of the three consultants were in the county at all times to help the teachers and the aides.

Motivation. For the purposes of this study, we will consider motivation to mean, anything that will impel or incite students to do what they normally would not do.

IV. DELIMITATIONS OF THE STUDY

The scope of this study was limited to the Todd County school system.

This study will cover the nearly three years that the Engelmann-Becker Follow Through program has been in effect in Todd County plus a comparable number of years before Follow Through was put into effect.

CHAPTER II

REVIEW OF THE LITERATURE

The motivation factor is a most important one when considering the academic achievement of the Indian child. In the average American school, a form of motivation which is important is the individual's desire to compete with and do better than his fellow pupils. This is a carry-over to the schools of one of the outstanding aspects of American middle-class culture. This is in direct opposition to another facit of the Indian culture which Havighurst reported as follows:

> . . . most of the tribes which survive today are cooperative in their basic attitude. They work and share together in large families and in neighborhood groups, and they value sharing and co-operation more than individual differences and competition.[1]

Consequently, when a teacher in a federal school who has become accustomed to the assumption that children are competitive tries to use this kind of motivation, she may find the teaching results rather discouraging. Each of the teachers must find other ways to motivate the group.

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[1]Robert J. Havighurst, "Education Among American Indians: Individual and Cultural Aspects," The Annals of the American Academy of Political and Social Science, 311:109, May, 1957.

Havighurst explained this when he said:

> The teacher would do well to discover other forms of motivation for school work, including the use of group procedures and the provision of acitvities which the Indian children enjoy in themselves.[2]

Thus, the motivation factor may in some degree result in a difference in achievement between Indian pupils and members of the dominant culture.

An Indian pupil must also have an interest in what he is doing in school. This factor would apply not only in every day class work, but also in standardized testing. Benedict reported numerous studies which show that the results of group tests of two different cultural groups are comparable only when both are interested in doing as well as they can.[3]

CHANGE IN MOTIVATION AND GROUP IDENTIFICATION. A child's change in motivation arises through his seeing regions of factors of his life space in a new light. To a fourteen year old boy, a girl, once "something to pull the hair of," comes to be the thing to be quite gently cuddled. A change in motivation is very closely related to changes in group identification. To a large degree it is the groups to which one belongs that are the source of his ideology and consequently of his motivation. One's person

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[2] Ibid.

[3] Ruth Benedict, Race: Science and Politics (New York: Modern Age Books, 1940), p. 110.

emerges through his becoming a member of a group and it develops as he changes his group allegiances. An adolescent's conformity to his peer group standards is a striking example of this developmental process.[4]

CONFLICTS IN MOTIVATION. In modern western society there is a more or less permanent conflict between various attitudes, values, ideologies, and styles of living of children and adults. Adolescents are caught midway in this conflict. Consequently, they experience great difficulty in defining their roles. In turn, uncertainty of their roles creates ambiguity in their motivations. They do not know when they should behave and be treated as adults and when they should continue as children. When they desire to behave like adults, they lack understanding of the adult world they are entering. Particularly if youth have been excluded from surrounding adult worlds, they are in the dark concerning them.

They have little idea of consequences of various kinds of adult behavior. Thus, broadening of life spaces to include both childhood and adult roles brings with it ambiguous situations which they often are ill equipped to handle. These conflicts and inadequacies in motivation lead adults to feel that adolescents manifest inadequate appreciation of values, emotional instabilities, tendencies

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[4] Morris L. Bigge and Maurice P. Hunt, Psychological Foundations of Education, Harper and Row, Publishers, New York, and Evanston, 1962, p. 176.

to take extreme positions, and, from time to time, undue shyness and aggressiveness.

Adolescents' tasks are magnified by the basic nature of the society within which they find themselves. What they learn from books, as well as adult precepts about what they should accomplish, is laden in contradictions. A youth is urged to develop the habit of doing free reading at home; simultaneously he goes home from school loaded with busywork to be done. A boy is told that honesty always is the best policy, then hires out part-time and sees the "tricks of the trade". In experiences like these, adolescents find a great variety of conflicting religious, political, economic, and occupational values being fostered within the groups with which they identify themselves. These conflicting principles often become personalized as individual conflicts in motivation.

Because of their unstable position in regard to values, adolescents are likely to be ready to follow anyone who will offer a definite pattern of values which gives "all the answers". This is one explanation of why adolescents are particularly susceptible to conversion to absolutistic systems of thinking, which enable them to structure their fields, i.e., make sense of their personal-environmental relationships, in a rigid manner and thereby resolve their conflicts.[5]

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[5] Ibid. pp. 198-199.

HOW MAY NEEDS BE DEFINED MORE ADEQUATELY? The term needs does not have to be superseded or discarded; it can be redefined in such a way that its use will be less ambiguous and more effective. Cognitive-field psychologists have attempted to do just this. Kurt Lewin conceived of need as a nucleus around which other psychological concepts are clustered; it has "...somewhat the connotation of a demand for something regarded by the person as more or less essential for himself." A need is equal to a psychological tension which is manifested in goal-seeking behavior; thus, each person is aware of needs even though he may be unable fully to verbalize them. Since needs arise from the interaction of a person and his psychological environment, they are as individualized and unique as the numerous interactive situations through which a person lives.

No one with a cognitive-field point of view would attempt to list the basic needs which all human beings now are, always have been, and always will be attempting to satisfy. Such a listing would have to be broad enough to cover motivations of all people in all cultures during all times. Although, within a culture, some degree of commonality of needs exists, it is not usually in the area of common cultural needs that a teacher faces his crucial problems in dealing with children.[6]

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[6]Ibid. pp. 213-214.

WHAT DOES MOTIVATION MEAN TO EACH FAMILY: Motivation refers to the "mainsprings" or instigating forces of behavior; people do what they do because of motivation. Stimulus-response associationists and Gestalt-field psychologists hold contrasting and seemingly incompatible ideas about the nature of motivation. These differences go back to the contrasting conceptions of basic human nature held by the two schools of thought. If one views man and the universe mechanistically, he will prefer a theory of motivation compatible with this opinion; if he views man as a purposeful, reflective, and creative individual, he will have a quite different theory of motivation.

WHAT IS MOTIVATION TO STIMULUS-RESPONSE ASSOCIATIONISTS? "Associationists tend to regard man as an intricate machine." Machines operate with blind regularity, according to a set of fixed principles. Even a machine as complicated as an electronic brain does not operate purposefully as we usually use the term. An electronic brain does not know what to do until it has been set by a human being. Even electronic brains which can correct their own errors and do other seemingly fantastic things still behave as they do because some person has designed and regulated them. In a sense, a machine has no more purpose than a falling rock; it acts, but it has no thought-out goal. Stimulus-response theorists generally attribute this same quality to human nature.

According to the stimulus-response theory, drives and emotions are a result of prior conditioning and nothing can be done to resist them. When relevant stimuli appear, conditioned responses operate automatically. Behavior can be predicted because it is regulated through conditioning. To a stimulus-response psychologist, then, all behavior is stimulus directed, whether the stimulus comes from within the organism or without. Motivation is defined as the urge to act which results from a stimulus. Since behavior is stimulus directed, it is not related to purpose of any kind.

There are certain obvious aspects of the behavior of men or lower animals which do not appear to be explained by the mechanical concepts of the stimulus-response theory. One of these is attention. At any given time, a person pays attention to one thing rather than another. At this moment, the reader of this paper is "attending" to this page rather than to a television program, a poker game, or a pretty girl. So the fact of attention seems to demonstrate that human behavior is governed by purpose. Stimulus-response theorists concede that a person may often respond selectively to one or a small group of stimuli at a time. However, they argue that what appears to be selective response can be explained according to stimulus-response principles and that the existence of purpose need not be assumed. A

person selects one response rather than another, according to a stimulus-response psychologist, because of the particular combination of prior conditioning and present physiological drives and stimuli which are operating at the moment of perception. To a stimulus-response theorist, to introduce purpose as an explanation of motivation is to risk introducing some kind of super-natural guiding force and to make impossible a truly scientific approach to the study of behavior.

An associationist's theory of motivation has important implications for education. According to his viewpoint, a child does not have to "want" to learn history in order to learn it. He does have to be persuaded to study it, to repeat the verbal responses which we associate with a knowledge of history. Anyone can learn anything of which he is capable if he will only allow himself to be put through the pattern of activity necessary for conditioning to take place. Thus, an associationist does not talk much about such things as "psychological involvement" or "helping students see the point of learning". Instead, he engages students in activity and assumes that activity with reinforcement automatically produces learning. A teacher carefully plans which learnings (responses) he wants students to develop. He then induces these responses and associates them with stimuli.

WHAT IS MOTIVATION TO GESTALT-FIELD THEORISTS? Within the Gestalt-field frame of reference, behavior is a function of a total situation, i.e., a person interacting within a field of psychological forces which includes memories, anticipations, purposes, and interpretation of relevant physical objects and events. Motivation cannot be described as merely an impulse to act triggered by a stimulus. Rather, motivation emerges from a dynamic psychological situation, characterized by a person's desire to do something.

According to Gestalt-field psychologists, a goal may be either positive or negative--something one wants to achieve, or something he wants to avoid. When a barrier, i.e., any obstacle to the direct and immediate achievement of a goal, whether physical or psychological, appears, a person feels tension. He tries to relieve tension by surmounting the barrier. The tendency to release tension by proceeding toward a goal, including the overcoming of whatever barriers are in the way, is motivation.

Stimulus-response theorists in the Thorndikean tradition make much of pleasure and pain, or satisfaction and annoyance, as instigators of behavior. An organism presumably is so put together biologically that it seeks to achieve pleasurable states and to avoid painful ones. Gestalt-field psychologists are more likely to talk about success and failure as motivators, the former being the

"reward" for completing an act. Success and failure are not merely achievements as such but represent the relationship between a person's ambitions and his achievements. If he has a certain level of aspiration and is able to achieve this level, he feels good about it. If he attains success at one level of aspiration, he is likely to raise the level, and to continue doing so as long as he is able to perform successfully. Thus, goals tend to be self-set and to change in dynamic fashion with each new experience.

Another feature of the Gestalt-field theory of motivation which sets it apart from the stimulus-response theory is the emphasis placed on the present situation. Motivation, to the Gestalt-field theorist, grows out of one's contemporary life space--the psychological forces which are operating right then. In contrast, a stimulus-response theorist tends to think of motivation as emerging from an accumulation of historical events, i.e., past conditionings, coupled with currently operating organic drives. A stimulus-response theorist looks backward into a person's life to determine why he behaves as he does now. A Gestalt-field psychologist does not ignore the impact of previous experience or a person's contemporary life space, but in explaining the causes of behavior he focuses on the present scene as the person experiences it. For these reasons, it is common to think of stimulus-response psychology as embodying a historical

approach and Gestalt-field psychology as embodying a situational approach.

A teacher who accepts the Gestalt-field concept of motivation and a teacher who operates within a stimulus-response framework are likely to approach teaching in fundamentally different ways. For one thing, a teacher with a Geatalt-field orientation is concerned always with the problem of personal involvement, i.e., helping students see a need to learn. The personal goals of students will always be relevant. This does not mean that he will cater to their every whim. Often he will try to help them rethink their goals and discard those which are trivial and whimsical. Much of the time he will attempt to arrange the teaching-learning situation so that students will adopt goals entirely new to them. He will not forget that, unless a child realizes a need to learn something, the child either will not learn it at all or will learn it only in a transitory and functionally useless way.[7]

As a motivational device, a teacher may deliberately promote a feeling of tension in students.[8]

LEARNING CONSISTS OF FOUR TYPES OF CHANGE. Lewin considered learning to consist of four types of change, namely, change in cognitive structure, change in motivation, change

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[7] Ibid. pp. 280-283.

[8] Ibid. pp. 214-215.

in group belongingness or ideology, and gain in voluntary control of musculature or learning skills. He distinguished between the first two rather sharply. To him, change in cognitive structure meant development of perceptual knowledge. It was centered in the topological-structural-aspects of a situation. Change in motivation, in contrast, meant learning to like or dislike certain areas-aspects of a life space. However, he recognized that even changes in motivation arise from changes in cognitive structure; to change the valence of an activity for a child, one must change the cognitive structure of that child's life space in regard to it.[9]

HOW MAY WE IMPROVE MOTIVATION? When a person develops a state of tension resulting from unsatisfied need, we say that he is motivated. Motivation may spring from a variety of needs, ranging from those which are largely physiological in origin to those which are primarily psychological, such as a conflict in religious belief. The person's aim becomes the reduction of tension, which can occur only as the need is satisfied or partially satisfied.

Obviously, motivation plays a central role in learning. Students who are motivated work purposefully and energetically. They display few if any "discipline" problems. A teacher who can keep his students well motivated has won more than half the battle.

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[9]Ibid. p. 358.

In virtually every school subject, a few students will appear well motivated; likewise, a few will appear to have no motivation toward learning and in spite of a teacher's best efforts will remain that way. Another group will respond more or less well to the teacher's efforts to produce motivation. It is among this middle group that teachers feel their greatest sense of accomplishment or frustration.

EXTRINSIC VS. INTRINSIC MOTIVATION. Intrinsic motivation is that which arises when the resolution of tension is to be found in mastering the learning task itself; the material learned provides its own reward. A boy who studies the construction of model airplanes diligently so he can make a model is experiencing intrinsic motivation. Extrinsic motivation occurs when a person pursues a learning task, but for reasons which lie outside of it. If a boy studies model airplanes because he thinks it will please his father, an ex-pilot, rather than because of a personal interest in model planes, he is moved by extrinsic motivation. After making the distinction, it is necessary to point out that in most learning situations motivation cannot be dichotomized so neatly. It is a function of the total situation and hinges on some blend of personal concern for the work itself and concern for extrinsic factors. As practicable working principle, motivation is probably always a function of an interactive situation.

Obviously, both emphases on motivation work in the sense

that they both lead to learning. However, educational psychologists condemn extrinsic motivation as undesirable because, since the material learned does not in itself serve any purpose of the learner, he tends to forget it as soon as his extrinsic purpose is met. In addition to poor retention of material learned, extrinsic motivation usually leads to careless, inaccurate learning. The learning task is hurried through as quickly as possible so that the reward may be obtained. The student is not likely to care how he gets the reward--copying someone else's answers is as good a way as any. This appears to be the working out of Thorndike's law of effect and is incompatible not only with the tenets of field psychology but with what is usually recognized in the literature as the best of modern school practice.

In spite of the undesirability, on psychological grounds, of an emphasis on extrinsic motivation, in some situations many teachers feel they have no choice but to employ it. When this is the situation, teachers may be undecided as to whether to use rewards or punishments. A number of studies—in the Thorndike tradition--have been conducted in an attempt to determine whether it is more effective to praise students for what they learn or blame them for what they do not learn. After reviewing these studies, Stephens decides that the evidence is so conflicting that no definite conclusion can be drawn. The only conclusion which seems warranted is that either praise or blame is usually more effective in promoting

learning than a teacher ignoring the achievement or lack of achievement of students.[10]

ATTENTION SPAN AND MOTIVATION. Attention span refers to the length of time which a person can pursue a learning task without having his attention falter seriously. Attention span is obviously a function of the level of motivation, and it is misleading to say, as some psychologists have said, that the attention span of children increases with age. It increases with motivation.

We have seen small children work as persistently and diligently at a task as any adult would be likely to do. The difference between childhood and adulthood appears to be that adults are better able to subordinate short-run pleasures in the interest of longer-range pleasures; adults find it easier to "live for the future." Hence, they can more easily develop long-range motivation for a short-range learning task which requires massed practice--like learning a foreign language quickly.[11]

THE PRINCIPLES OF ENCOURAGEMENT. The child's motivations, the purposes of his behavior, must be made evident if one is to correct his academic, behavioral, or social failings.

Many psychological and psychiatric techniques can be

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[10] Ibid. pp. 373-375.

[11] Ibid. p. 380.

applied to the understanding of motivation. We shall concern ourselves primarily with those techniques that teachers and counselors can use without intensive training and constant professional supervision.

Observation of behavior can be an extremely profitable technique if a frame of reference and a set of principles are chosen that make observation dynamically meaningful. Usually, observation is used for descriptive rather than diagnostic purposes. It can provide vital information if the observer:

1. Knows the subjective field in which the behavior takes place. This requires seeing the situation through the eyes of the child rather than in terms just of the educator's values and experiences.

2. Knows what to look for. Instead of observing what the child does and how he does it, one must see his purposes, the goals of his actions.

3. Records and observes all pertinent behavior, characteristic and routine as well as unusual, since every movement of the child has meaning.

4. Recognizes that behavior is not merely a response to outside stimulation, but a creative act of the child in trying to find a place for himself.

5. Is aware of a teleo-analytic frame of reference in the interpretation of the observed behavior.

6. Looks for recurring patterns.

7. Is aware of the child's stage of development.

THE PHILOSOPHY OF ENCOURAGEMENT. In any attempt to initiate learning or development, the role of encouragement must be recognized.

> One of the problems involved in initiation of performance is that of overcoming inertia. This is a difficult enough task in its own right, but it is enormously and unnecessarily worsened if the student is permitted to be overwhelmed by exposure, without modifying precautions, to the full scope of the task expected of him. Just as a child can sometimes be induced to eat when presented with a small portion of food, after refusing to start on a larger portion, so a student can more often be stimulated to work by a reasonable partial assignment than by assignment of the whole task all at once.

We cannot expect progress unless we are ready to recognize that in addition to the child's assets and liabilities he needs the assistance of encouragement.

All children need to feel worth while (many call this feeling "secure"). Edith Neisser lists six attitudes through which we can give "security" to children.

1. You are the kind who can do it.
2. It's all right to try. Failure is no crime.
3. Provide plenty of opportunities for successful achievement. Don't set standards so high children are constantly falling short.
4. Be pleased with a reasonably good attempt. Show confidence in their ability to become competent.
5. Accept children as they are. Like him as he is so he can like himself.
6. Guarantee certain rights and privileges.[12]

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[12] Don Dinkmeyer and Rudolf Dreikurs, Encouraging Children to Learn: the Encouragement Process, Prentice-Hall, Inc., Englewood Cliffs, N. J., 1963, pp. 45-48.

A CASE FOR MOTIVATION. If Dr. Samuel Shepard Jr. is asked to explain the program of his Banneker School District in St. Louis, he has a ready reply: "The heart and soul of it is hard work." And then he quickly adds, "I have an abiding faith that our children have the ability to learn."

So successful has been his program in upgrading the scholastic achievement of slum children in elementary schools and in broadening them culturally that his methods are being expanded to the high schools in the Banneker District.

As an assistant superintendent of schools, Dr. Shepard, a Negro, is in charge of the 15,000 elementary school children of the Banneker District. The area is 95 per cent Negro, and about 54 per cent of the pupils are from families on public welfare.

In the Banneker District, it is common for six or seven children, their parents and sometimes their grandparents to live in three or four rooms, with plumbing that seldom works. They frequently are hungry, and in winter cold becomes a part of their daily life.

A child may enter school in the Banneker District at the age of six with virtually no vocabulary. "Shut up,"

"No," "Get out" and various profane expressions may have been the extent of the conversation in his home.

The poverty-welfare cycle has persisted in the Banneker area for decades. Residents of the area, child and adult, apparently had come to expect nothing that would improve their lot. Their way of life had been based on hopelessness and ignorance.

This was the environment in which Dr. Shepard initiated his action program in 1957. The St. Louis school system had adopted the three-track system in high schools several years before, and it had begun giving achievement tests to eighth-graders to determine whether they were suited for the advanced, average or below-average tracks in high school.

Banneker eighth-graders scored lowest among the five elementary school groups in the city. At hand were plenty of excuses, but Dr. Shepard rejected them and began his drive for excellence.

If children of a minority race were to have real acceptance in a biracial school system, they would have to prove they could compete on the same level. This was the message he hammered home at meeting after meeting with teachers, students and parents. To the pupils he preached the importance of sound study habits. He convinced them education was the key to a decent job.

"We have the kids as captives," Dr. Shepard said. "We can do a great deal toward motivating these youngsters to want to lift themselves to a better standard of living than they now enjoy. We are the means and the vehicle by which this can be accomplished."

With blunt frankness, Dr. Shepard told principals, teachers and parents about inadequacies prevalent in the Banneker District, but always he sought to motivate toward greater achievement all those involved in the educational process in his area. Charts went up showing relative standings of schools within the Banneker Group and the standing of the group as a whole compared with others in the city.

In two years, the median achievement level of the Banneker Group's eight-high pupils gained by eight months in reading, a full year in language and seven months in arithmetic. In the same period, the city's median had increased from four to six months. The advances were made in what educators consider the city's worst area from the standpoint of economic and cultural deprivation.

It is Dr. Shepard's conviction that the Negro cannot afford to be second-best in achievement. The educator puts it this way: "The Negro's first wish would be acceptance as an American, without giving or taking anything, so he could stand on his own feet and compete, and accept the consequences."

Since this is not the case, for the moment, for the

majority, it is most important to work for acceptance in two areas. One, of course, is to have the real qualifications, whatever they may be, academic or otherwise. The second is that good conduct and character go along with this.

"Without reference to race, the story of America--its great men and women--is the story of how they overcame obstacles. This would be a great hope and faith we should have, that others have overcome and moved mountains."

In a four-year period, the average intelligence quotient of the children in the Banneker District was raised 11.5 points and children were brought up to the national norm in language, writing and arithmetic. No district in St. Louis has a higher daily attendance rate. Teachers and administrators resist being transferred from the Banneker District. The opposite is true of such areas in most cities.

As the program goes forward, parents and children are constantly urged and encouraged to achieve. Not only is achievement possible, they are told, but it also brings rewards.

A grant from the U. S. Office of Economic Opportunity of $482,309 will finance the Banneker community project until June 30, 1966. As described by the St. Louis Board of Education: "This grant will continue and extend the Banneker program of pupil motivation and community action through a variety of after-school, evening, and weekend

activities. This project to improve achievement motivation and language proficiency is aimed at total involvment of pupils, parents, teachers, principals, and others in the community."

In less formal language, educators in St. Louis continue to be "optimistic and enthusiastic" about the recent and present activities in the Banneker District and the outlook for the coming months. They are looking forward to the imminent expansion of the Banneker District project to include Vashon High School students and their parents. The vast majority of Banneker elementary pupils who attend high school go to Vashon.

Among the activities planned for Vashon are field trips, personal and social development classes, a variety of clubs, lay readings of student compositions, private instruction in instrumental music, remedial classes in the language arts, mathematics and study skills. Already in the Vashon extension of the Banneker program, a summer school has been conducted for educationally retarded students.

While plans have been worked on for the Vashon project, the Banneker District has hummed with activity throughout the summer. Beginning June 28, a six-week "Country Summer School" was conducted in fourteen elementary schools. Pupils recommended by principals attended classes several times each week. During these sessions, teachers gave directions and guidance to pupils in both educational and cultural activities.

A spokesman for the Board of Education commented on the classes: "The purpose of these sessions was to enrich the lives of disadvantaged children, to rise and to strengthen their sights and values, to provide them with a continuing opportunity to know and understand the cultural heritage of St. Louis, and to provide them with the study and intellectual skills they will need in our increasingly technological economy."

The pupils visited the Gateway Arch, the Old Court House, Eads Bridge and other outstanding examples of architecture. They went to the St. Louis Public Library and to the Art Museum to obtain first-hand information for written and oral reports. Others observed the vast residential, business and industrial development now going up in the Mill Creek area. Some walked through Forest Park to learn the names of trees.

In their endeavors, they always received quiet but constant encouragement from their teachers to become self-motivated in learning. Sixty teachers worked with the students in the six-week course.

Some seventh-graders realized they needed help in certain subjects. The Mr. Achiever Summer School was held for them. They chose the subject in which they felt they were weakest and then were recommended by their principals for enrollment in the school.

All who attended the school took study skills. Read-

ing, language and arithmetic received great emphasis. About nine-hundred-sixty pupils participated in the classes, which were held during the three weeks prior to the opening of school in September.

Beginning last October 15, six-hundred children from sixteen of the district's twenty-three schools were enrolled in Saturday morning classes given at four schools. This work of education enrichment was financed by a $108,000 grant from the Office of Juvenile Delinquency and Youth Development. Since that grant's expiration June 30, the program has been financed with Office of Economic Opportunity funds.

In the same period, about one-thousand parents of Banneker children took a variety of evening classes. Many of the adults are attempting to prepare themselves for grammar and high-school equivalency tests. School officials believe that the shared educational experience of parent and child will further the motivation of the students to continue school until graduation.

Certificates of honor were presented to parents who attended the various academic and special interest classes for adults in the past school year. These classes included millinery, sewing and ceramics.

Another aspect of the Banneker experiment is the use of schools for afternoon and evening study. In this way, children may do their homework free from distracting and unsatisfactory home environments.

Two phases of the Banneker project last winter which created great interest in the St. Louis area were Dr. Shepard's "study-in" program and "Operation Dine Out."

More than six-thousand Banneker pupils in the fourth to eighth grades participated in the "study-in" classes, which began April 12 and lasted for four weeks, with sessions lasting from 7 to 8:30 p.m.

During the first week, parents took their children to libraries to browse, read newspapers and periodicals and acquaint themselves with the varieties of general reading materials. The second week was devoted to research, with parents accompanying their children to libraries to study scientific or historical material or pursue a particular study project.

The third week-Conversation Week-sought to promote communication between the pupils and their parents on matters ranging from current political events to family budgeting. A week of recitation by the pupils concluded the program. The children recited poems and excerpts from literature in competition for oratory awards.

Mrs. Garnell DeRamus, program chairman for the Banneker District Council of Parent Organizations, which conceived the program, said "we feel the study-in program was just as dramatic and beneficial as sit-ins and lie-ins."

"Operation Dine Out" was designed to give Banneker children self-confidence enough to dine in public restaurants.

Dr. Shepard said he regarded "Operation Dine Out" as another motivating step for children in the city's lowest income area to continue their education and upward climb from poverty.

Dr. Shepard found that even though a graduate of his district might have acquired enough education and training to provide means to buy meals in such places, lack of experience in dining often proved to be a formidable barrier.

He discovered that many youngsters became panicky at the idea of eating in a restaurant for the first time. Almost all of the district's seventh-graders dined at the Chase-Park Plaza, Sheraton-Jefferson, Mayfair and Statler-Hilton hotels, the Cheshire Inn, the Diplomat Motel, Menrici's and Miss Hulling's. The meals were financed by Banneker district businessmen, who sometimes ate with the children. The children dined in groups of eight chaperoned by teachers, who paid their own way.

The Banneker program has many facets, but its basic and continuing objective is to motivate both children and parents to achieve. They are constantly reminded that achievement brings reward.

Says Dr. Shepard: "I offer no apologies for trying to move these youngsters into the middle class, if middle class means having enough to eat, a good house and a productive job."[13]

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[13]Robert M. Collins, Motivation, Southern Education report, July-August, 1968.

CHAPTER III

MOTIVATIONAL METHODS OF THE ENGELMANN-BECKER PROGRAM

I. TANGIBLE REINFORCERS

In all activities, the teachers systematically reinforce those behaviors that are desired. The teacher's use of such tangible reinforcers as points which can be exchanged for prizes, various kinds of food and candy treats, names which were kept on a bulletin board indicating individual progress, students work that was acceptable placed on display throughout the class rooms, are guided by the principle that children will produce behaviors if these behaviors are reinforced. The child is given a "payoff" for behavior that is desired. A payoff is not given for behaviors that are not desired. The child has a choice. He can either continue to produce the behavior that is not desired and receive no payoff, or he can produce the behavior that is desired and receive the payoff. Children choose the stronger payoff. Teachers of young children sometimes react negatively to the idea that one should "control" the child's behavior. However, a teacher controls a child's behavior whether she intends to do so or not. If she gives the child a great deal of attention when he misbehaves, she teaches him that there is a strong payoff for misbehaving. He will continue to misbehave, and the teacher has helped to strengthen this un-

desired behavior. If the teacher consciously controls the payoff the child receives, she will ignore the undesired behavior and give the child a great deal of attention when he does something that she desires, such as working well on a task. The child will now learn a far more productive role about social behavior.

II. ENJOYABLE ACTIVITIES

Enjoyable activities were another of the systematic reinforcements that the teachers used for desired behavior. Some of these were: games used to teach the various subjects, students allowed to do materials that they like to do when they finished their assigned work, and students allowed to do enjoyable activities such as listening to the record player when they were through with their assigned work. It should be pointed out that a certain quality of work was required before they were allowed to do the enjoyable activities. In other words, they could not rush through their work in order to be the first to do enjoyable activities. These activities were carefully rationed and used in conjunction with the other types of reinforcement.

III. SOCIAL PRAISE AND TEACHER ACCEPTANCE

The use of social praise and teacher acceptance was probably the most used and most effective reinforcement given. Students need and desire this reinforcement much more than anything else that a teacher has to offer. Some of the ways that this was done in the Follow Through program were: much teacher and teacher aid interest was shown to the activities

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that each student was doing, teachers and teacher aids encouraged members of the class to show approval of correct responses by clapping their hands or verbal approval. A job well done might be rewarded by a hand shake from the teacher. However, if someone in the group did not perform well, they were not given a hand shake. Another psysical contact used by the teachers and teacher aids was a pat on the back or shoulder for a good job or for sitting quietly and not bothering other students who were working.

CHAPTER IV

EVALUATION OF THE MOTIVATIONAL METHODS OF THE ENGELMANN-BECKER PROGRAM

Testing instruments which were used in the Engelmann-Becker Follow Through program will be evaluated in this chapter. The evaluation will result in an indication of whether motivation is affecting achievement of elementary students in the program or does not affect achievement of students in the program.

I. EVALUATION OF THE SLOSSON INTELLIGENCE TEST

It has been hypothesized that the Slosson Intelligence Test is an adequate instrument for assessing academic ability. The analysis is as follows:

1. Arbitrarily assigned limits of one-half year above and one-half year below final grade placement is acceptable school performance.

    a. Students achieving scores above grade placement plus one-half are considered achieving beyond their grade level and are given a plus.

    b. Students achieving scores below grade placement minus one-half are considered achieving below their grade level and are given a minus.

    c. Students achieving within the prescribed limits (one-half year above and one-half year below final grade placement) are considered to be achieving within their grade level and are given a zero.

2. Slosson scores are alligned with student achievement as follows:

   a. Scores within ninety and one hundred ten are considered as being within the normal range.

      i. Students scoring within the normal range and who are achieving within their grade placement are assigned a zero, with regard to their Slosson.

      ii. Students scoring within the normal range and who are achieving above their grade placement are assigned a plus.

      iii. Students achieving below grade placement but showing normal Slosson scores are assigned a minus.

   b. Scores below ninety are considered below normal.

      i. Students scoring below ninety, but achieving within grade placement are assigned a plus. (or above grade placement)

      ii. Students scoring below ninety and achieving below grade placement are assigned a zero.

   c. Scores above one hundred ten are considered above normal.

      i. Students scoring above one hundred ten, but achieving at or below grade placement are assigned a minus.

      ii. Students scoring above one hundred ten, and achieving above grade placement are assigned a zero.

3. Two analyses are applied:

   a. Chi-square will be used to analyze grade level at kindergarten, first, and second grade.

   b. Chi-square will be used to analyze achievement/potential ratio.

Grade level analysis:

Kindergarten:

$$X^2 = \frac{(18.2-16.0)^2 + (61.8-68)^2 + (20.0-16.0)^2}{33.33}$$

$$= \frac{(1.2)^2 + (6.2)^2 + (4.0)^2}{33.33}$$

$$= \frac{1.44 + 38.44 + 16.00}{33,33}$$

$$= \frac{55.88}{33.33}$$

= 1.676, degrees of freedom = cases - 1 = 3 - 1 = 2

This indicates no significance at this grade level because it is below the 3.0 level.

First grade:

$$X^2 = \frac{(19.4 - 16.0)^2 + (54.8 - 68.0)^2 + (25.8 - .6.0)^2}{33.33}$$

$$= \frac{(3.4)^2 + (13.2)^2 + (9.8)^2}{33.33}$$

$$= \frac{11.56 + 174.24 + 96.04}{33.33}$$

$$= \frac{281.84}{33.33}$$

= 8.444, degrees of freedom = 2.

This indicates a significance above the 0.02 level.

Second grade:

$$X^2 = \frac{(23.3 - 16.0)^2 + (55 - 68)^2 + (21.7 - 16.0)^2}{33.33}$$

$$= \frac{(7.3)^2 + (13)^2 + (5.7)^2}{33.33}$$

$$= \frac{53.29 + 169.00 + 32.49}{33.33}$$

= 254.67, degrees of freedom = 2.

This indicates a significance at about the 0.02 level.

Achievement/ potential ratio analysis:

Below normal:

$$X^2 = \frac{(18.2 - 16)^2 + (19.4 - 16)^2 + (23.3 - 16)^2}{16}$$

$$= \frac{(2.2)^2 + (3.4)^2 + (7.3)^2}{16}$$

$$= \frac{4.84 + 11.56 + 53.29}{16}$$

$$= \frac{69.69}{16}$$

$$= 4.355, \text{ Degrees of freedom} = 2.$$

This is significant at about the 0.05 level.

Normal:

$$X^2 = \frac{(61.8 - 64)^2 + (54.8 - 64)^2 + (55.0 - 64)^2}{64}$$

$$= \frac{(2.2)^2 + (9.2)^2 + (9.0)^2}{64}$$

$$= \frac{4.84 + 84.64 + 81.00}{64}$$

$$= \frac{170.48}{64}$$

$$= 2.664, \text{ Degrees of freedom} = 2.$$

This indicates no significance at this level because it is below the 3.0 level.

Above normal:

$$X^2 = \frac{(20 - 16)^2 + (25.8 - 16)^2 + (21.7 - 16)^2}{16}$$

$$= \frac{(4)^2 + (9.8)^2 + (5.6)^2}{16}$$

$$= \frac{16 + 96.04 + 31.36}{16}$$

$$= \frac{143.40}{16}$$

$= 9.00$, Degrees of freedom $= 2$.

This is significant at about the 0.005 level.

II. EVALUATION OF THE WIDE RANGE ACHIEVEMENT TEST

In the evaluation an assumption is made that motivation is more clearly related to achievement than to potential. For this reason, analysis directed itself to decreases in low achievers. Directional trends indicating a reduction in the frequency of low achievement were tested for positive significance. Similarly, directional trends showing an increase in low achievers were assessed for negative significance. All hypotheses are thus one-tailed. Trends were determined essentially on the appearance of the frequency appearing at the end of the sequence, rather than balancing all frequencies.

A second consideration in analysis arises as a function of the Wide Range Achievement Test. Kindergarten achievement requires the student to be able to identify three alphabetic symbols. First grade achievement is awarded from an ability to identify five to seven simple words. Second grade achievement is recognized as an ability to read about eleven words. The gross ordinal nature of the tasks required support ordinal analysis. Chi-square was selected as the analytic tool to determine departure from goodness-of-fit, rather than to asses significance in differences.

The third consideration used in the analysis was that all academic achievement is normally distributed throughout the universe of students. Foodness-of-fit allows for the reality that, within any grade level, achievement levels will vary from two or more grades above and below the grade being tested.

The table below presents the number of students scoring below their grade norms in Reading, Spelling, and Arithmetic. Totals and means for each column are also given.

Grade	Reading	Spelling	Arithmetic
2	17	43	20
1	30	17	12
K	11	12	6
Totals	58	72	38
Mean	19.3	24.0	13

As the central issue in this seminar paper was to assess the effects of motivation for achievement in school, an assumption is made that motivation would be reflected in reductions of school failures. The data indicate that students perform better in reading as their school career progresses through the second grade. A question might be raised with regards to spelling and arithmetic achievement. Chi-square was the analytical tool of choice. The two hypotheses tested were:

1. Achievement in reading is significantly improved as a function of motivation.
2. Achievement in spelling and arithmetic is reduced as school enrollment continues.

The analysis is presented below.

Reading:

$$X^2 = \frac{(17 - 19.3)^2 + (30 - 19.3)^2 + (11 - 19.3)^2}{19.3}$$

$$= \frac{(2.3)^2 + (10.3)^2 + (8.3)^2}{19.3}$$

$$= \frac{180.27}{19.3}$$

$$= 9.335, \text{ Degrees of freedom} = 2.$$

The obtained value exceeds the tabled value for Chi-square at the 0.005 level. As this obtained value exceeds the tabled value, the hypothesis is accepted. One may assume that the motivational properties operant in the project program are successful with regards to reading.

Spelling:

$$X^2 = \frac{(43 - 24)^2 + (17 - 24)^2 + (12 - 24)^2}{24}$$

$$= \frac{(12)^2 + (7)^2 + (19)^2}{24}$$

$$= \frac{554}{24}$$

$$= 23.0, \text{ Degrees of freedom} = 2.$$

Chi-square is significant beyond the 0.0005 level. This analysis supports the hypothesis that deficits in spelling achievement increase as school enrollment continues.

Arithmetic:

$$X^2 = \frac{(6 - 13)^2 + (12 - 13)^2 + (20 - 13)^2}{13}$$

$$= \frac{(7)^2 + (1)^2 + (7)^2}{13}$$

$$= \frac{99}{13}$$

= 7.61, Degrees of freedom = 2.

Chi-square is significant at the .01 level. This analysis supports the hypothesis that deficits in arithmetic achievement increase as school enrollment continues.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

I. SUMMARY

Students in the Engelmann-Becker Follow Through Program are given a wide variety of reinforcement with the hopes that the end result will be academic motivation. From the observation stand point, it appears that the program has produced a good deal of student participation in a small group setting.

The program has now been in effect under the Engelmann-Becker name for about two years. The program operated one other year under a different name. However, the general idea of reinforcement to promote motivation in the school setting is common to both programs.

II. CONCLUSIONS

It is concluded from this study that motivation is a very difficult thing to measure with the existing testing devices being used in the Follow Through Program. The tests do indicate that the students are doing quite well in reading but are laging in spelling and arithmetic. It can be atributed to the tremendous program of reading that is being offered to the Follow Through students.

Much of the materials for this program is still in the writing stage and this can be a factor which is affecting

the other subject areas. Another factor is that an ongoing program of changes and modifications is causing unsettled conditions at all levels of administration as well as at the teacher level.

Several parents have questioned some of the methods of instruction in this program. This at least is a good indication that parents are concerned about their child's education and are not just taking it for granted that he is getting a good education.

III. Recommendations

Since there is some question as to the accurateness of the Slosson and the Wide Range Achievement Test, it would be good to look at and evaluate several other testing tools to see if there might be a test available which will show a closer correlation.

New methods should be experimented with to find better ways of teaching spelling and arithmetic to these students. More relationship to their way of life would be a more motivating way of teaching these students spelling and arithmetic.

More communication with parents, teachers, and the local community in general would create a better understanding of what the program is all about and what it is that makes it a good one for their children.

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